ICF International / Laboratory Data Consultants
Environmental Services Assistance Team, Region 9
1337 South 46th Street, Building 201, Richmond, CA 94804-4698
Phone: (510) 412-2300 Fax: (510) 412-2304

MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Manager (TOM) RF
Quality Assurance (QA) Program, PMD-3

FROM: Doug Lindelof, Data Review Task Manager
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041
Technical Direction Form No.: 00105041 Amendment 7

DATE: January 8, 2008

SUBJECT: Review of Analytical Data, Tier 2

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC LA02
CERCLIS ID No.:	CAD042245001
Case No.:	None
SDG Nos.:	06-1781
Laboratory:	Applied Physics & Chemistry Laboratory (APCL)
Analysis:	Hexavalent Chromium
Samples:	5 Water Samples (see Case Summary)
Collection Dates:	March 15, 2006
Reviewer:	Stan Kott, ESAT/Laboratory Data Consultants

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

SAMPLING ISSUES: [X] Yes [ ] No

Data Validation Report

Case No.: None
SDG Nos.: 06-1781
Site: Omega Chem OU2
Laboratory: Applied Physics & Chemistry Laboratory (APCL)
Reviewer: Stan Kott, ESAT/LDC
Date: January 8, 2008

I. CASE SUMMARY

Sample Information

SDG 06-1781 Samples:	OC2-MW23D-W-5-196, OC2-MW15-W-0-198, OC2-MW15-W-1-199, OC2-MW13B-W-0-201, and OC2-MW12-W-0-203
Concentration and Matrix:	Low Concentration Water
Analysis:	Hexavalent Chromium
Method:	EPA Method 218.6
Collection Date:	March 15, 2006
Sample Receipt Date:	March 15, 2006
Preparation Date:	March 15, 2006
Analysis Date:	March 15, 2006

Field QC

Field Blanks (FB):	Not Provided
Equipment Blanks (EB):	Not Provided
Background Samples (BG):	Not Provided
Field Duplicates (D1):	OC2-MW15-W-0-198 and OC2-MW15-W-1-199

Laboratory QC

Method Blanks (MB):	MB
Associated Samples:	Samples listed above
Matrix Spike (MS)/MS Duplicate (MSD):	OC2-MW23D-W-5-196 MS/MSD
Duplicates:	MSD listed above and Laboratory Control Sample Duplicate (LCSD)
Analysis:	Hexavalent Chromium

Analyte	Sample Preparation Date	Analysis Date
Hexavalent Chromium	March 15, 2006	March 15, 2006

Sampling Issues

None.

Additional Comments

As directed by the EPA TOM, a Tier 2 data review of all QC results and calibrations, minus calculation check, was performed. A Table 1A is not requested.

The calculated percent difference (%D) for calibration standards 0.20 µg/L and 5.0 µg/L is 25% and 23%, respectively. This high %D indicates that the calibration may not be linear at the low end of the curve. Since the analytical method does not require analysis of a practical quantitation limit (PQL) standard to confirm linearity of the calibration curve at the 1 µg/L PQL, results less than 20 µg/L may have a high bias. The effect on data quality for low level samples is not known.

The laboratory sample receipt form was not provided in the data package. The sample temperatures at the time of receipt could not be evaluated. The effect on data quality is not known.

Initial and continuing calibration blank data were not provided and could not be evaluated. The effect on data quality is not known.

This report was prepared in accordance with the following documents:

- Region 9 Standard Operating Procedure 906, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Inorganic Data Packages*;
- *Methods For The Determination Of Metals In Environmental Samples*, EPA-600/4-91-010, June 1991; and
- *USEPA Method 218.6, Determination of Dissolved Hexavalent Chromium in Drinking Water, Groundwater, and Industrial Wastewater Effluents by Ion Chromatography*, Revision 3.3, May 1994.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	Parameter	Acceptable	Comment
1.	Data Completeness	Yes	
2.	Sample Preservation and Holding Times	Yes	
3.	Calibration	Yes	
	a. Initial		
	b. Initial and Continuing Calibration Verification		
4.	Blanks	Yes	
5.	Laboratory Control Sample (LCS)	Yes	
6.	Duplicate Sample Analysis	Yes	
7.	Matrix Spike Sample Analysis	Yes	
8.	Field Duplicate Sample Analysis	Yes	
9.	Sample Quantitation	Yes	A
10.	Overall Assessment	Yes	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. The 0.86 µg/L result for sample OC2-MW12-W-0-203 is above the method detection limit (MDL) but below the practical quantitation limit (PQL) and should be estimated.

Results above the MDL but below the PQL are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of quantitation.

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR INORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared in accordance with the document *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004.

U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.